CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

1. Viable, biologically substantially pure exfoliated fecal colonocytes isolated at normal ambient temperature.

2. The colonocytes of claim 1 bearing marker indicative of specific gastrointestinal condition.

3. The colonocytes of claim 2 bearing marker indicative of neoplastic transformation.

4. The colonocytes of claim 2 bearing marker indicative of immune dysfunction.

5. The colonocytes of claim 2 showing abnormality indicative of non-neoplastic gastrointestinal pathology.

6. The colonocytes of claim 1 being epithelial or nonepithelial cells of lymphoid origin.

7. The colonocytes of claim 1 expressing a chimeric immunoglobulin IgC.

8. The colonocytes of claim 1 expressing only IgA and CFc.

9. The colonocytes of claim 1 expressing only CFc.

10. A transport medium for collecting a fecal sample, comprising:

(a) a sufficient amount of an agent to sequester proteases present in fecal matter;

(b) a sufficient amount of a mucolytic agent to destroy mucus present in fecal matter; and

(c) a sufficient amount of a bacteriocidal agent to inhibit bacterial activity in fecal matter.

11. The transport medium of claim 10, wherein said agent for sequestering proteases is selected from the group consisting of plasma proteins, gel forming polymers and synthetic resins.

12. The transport medium of claim 11. wherein said plasma proteins are bovine serum albumin, egg albumin or human serum albumin.

13. The transport medium of claim 12, wherein the mucolytic agent is selected from the group consisting of N-acetyl cysteine, b-mercaptoethanol, capsaicin, dithiothreitol and guaiacol.

14. The transport medium of claim 13, wherein the bacteriocidal agent is selected from the group consisting of thimerosal, antibiotics and sodium azide.

15. The transport medium of claim 14 being a solution, comprising:

sodium bicarbonate:	350-500 mg;
bovine serum albumin:	2.5-15 gm;
N-acetyl cysteine:	250-500 mg;
Thimerosal:	100-300 mg; and
Puck's Saline G:	500 ml.

16. The transport medium of claim 15 being devoid of thimerosal, thereby transforming into a dispersion or suspension medium.

17. A method for isolating biologically substantially pure exfoliated fecal colonocytes at normal ambient temperature, comprising the steps of:

(a) collecting a fecal sample in a transport medium maintained at normal ambient temperature;

(b) dispersing the fecal sample in said transport medium diluted with a suspension medium;

(c) sedimenting cells present in the diluted transport medium of step (b) to isolate the cells from impurities by layering the cell suspension over a medium of heavier density;

(d) subjecting the cells in step (c) to an influence resulting in the formation of a cellular band at a boundary with said heavier medium; then

(e) recovering biologically substantially pure colonocytes from said cellular band.

18. The method of claim 17, wherein said heavier medium is of density ranging from about 1.033 to 1.20.

19. The method of claim 18, wherein said heavier medium is of density 1.20.

20. A method for detecting colorectal cancer, comprising the steps of:

(a) obtaining biologically substantially pure colonocytes; then

(b) reacting said colonocytes with a reagent to detect the presence of a marker determinative of cancer, occurrence of a positive reaction of said colonocytes with said reagent being indicative of the presence of cancer.

21. The method of claim 20, wherein said reagent is fluorescently labelled antibodies or plant lectins that generate a colored product.

22. A method for determining mucosal immunity of GI tract, comprising the step of comparing the number of immunocoprocytes recovered from a subject whose GI tract mucosal immunity is to be determined, with the number of immunocoprocytes recovered from a normal subject, a statistically significant deviation from normal value being indicative of the level of immune dysfunction.

23. A method for diagnosing GI tract pathology, comprising the step of determining the presence of inflammatory cells in a stool sample of a subject suspected of GI tract pathology, the presence of inflammatory cells being indicative of GI tract pathology.

24. The method of claim 23, wherein the presence of inflammatory cells is determined by reacting the

cells with antibodies to CD45 or COX-2, the cells that bind with said antibodies being inflammatory cells.

25. A method of producing antigen-specific monoclonal antibodies, comprising the step of employing antigen-specific immunocoprocytes as a clone in a standard hybridoma technique and recovering antigen-specific monoclonal antibodies.